NEWS RELEASE

February 3, 2023
AMADA CO., LTD.

Announcement of the “EGB” Series of Worker-Friendly and Environmentally Friendly Servo Press Brakes

Introducing the future of bending with worker support functions
and a new servo drive system



EGB-8025e



With automatic tool replacement device

EGB-1303 ATCe



Automatic robot specification

EGB-6013ARce

On February 3rd, AMADA CO., LTD. (Isehara, Kanagawa, Japan, President: Tsutomu Isobe) announced its “EGB” series of worker-friendly and environmentally friendly servo press brakes. These machines are equipped with newly developed worker-support functions and servo drive systems that enable anyone to perform sheet metal bending easily and reliably.

Currently, the sheet metal processing workplaces are suffering from a chronic shortage of workers, and also the workers who can perform bending are limited because bending includes a lot of dangerous work, and it takes a long time to train workers. To respond to this, these machines are equipped with an innovative guidance function that was created based on AMADA’s expertise in sheet metal bending, which has been cultivated with our customers over many years. Beginners can work with peace of mind, feeling as though they were being guided by skilled workers, so a quicker realization of personnel capabilities can be expected. Additionally, the machines are also equipped with newly developed butting monitors and back gauges, so that high-precision and complex processing can be performed without error and without hesitation.
Additionally, there are growing requirements for the electrification of drives, because this leads to a reduction in oil use and CO_2 emissions compared to hydraulic systems. However, it is difficult to simultaneously achieve both high-pressure and high-speed processing, so 1,300 kN machines previously used a hybrid system of servos and hydraulics. With these new models, AMADA has succeeded in electrifying up to 1,300 kN machines, which are the most commonly used machines in sheet metal processing. This reduces CO_2 emissions by up to 20% and oil usage by about 90%, reducing the burden

on the environment and the maintenance costs. AMADA has also developed an original motor specifically for press brakes that achieves both high pressure and improved cycle takt. Additionally, the newly developed servo drive system enables stable processing with high precision and improves productivity and environmental performance.

AMADA will continue to accumulate expertise in metal processing through dialogue with customers. We will also work to incorporate that expertise to develop products and support manufacturing sites.

■ Main features of the EGB Series

1. “Anyone” can perform highly-skilled bending and set-up operations

- **Guidance function**
  Advice about the process is displayed on a tablet that moves with the worker. It displays tips and precautions when the work to be performed is dangerous or difficult.
- **Butting monitor**
  The tablet displays real-time video of the butting area, which is invisible to the worker. Furthermore, AR technology is used to display the correct butting position and bending position composited on the video. Additionally, the number of back gauges has been increased from the conventional two to three, to allow a greater degree of freedom in the butting, improve the positioning accuracy and eliminate the need for jig setup. It is possible for anyone to perform the butting of workpieces with complex shapes without hesitation.
- **Voice control**
  Previously, to perform steps such as starting and stopping the machine, the worker had to move to operate the NC equipment, and it was necessary to lift and lower the heavy workpieces each time. On the EGB series, the machine can be operated with the worker's voice and it is possible to receive voice notifications from the machine, so it is possible to reduce unnecessary movement and operations.

Advice with the guidance function



Butting monitor “butting position” and “bending position” instructions

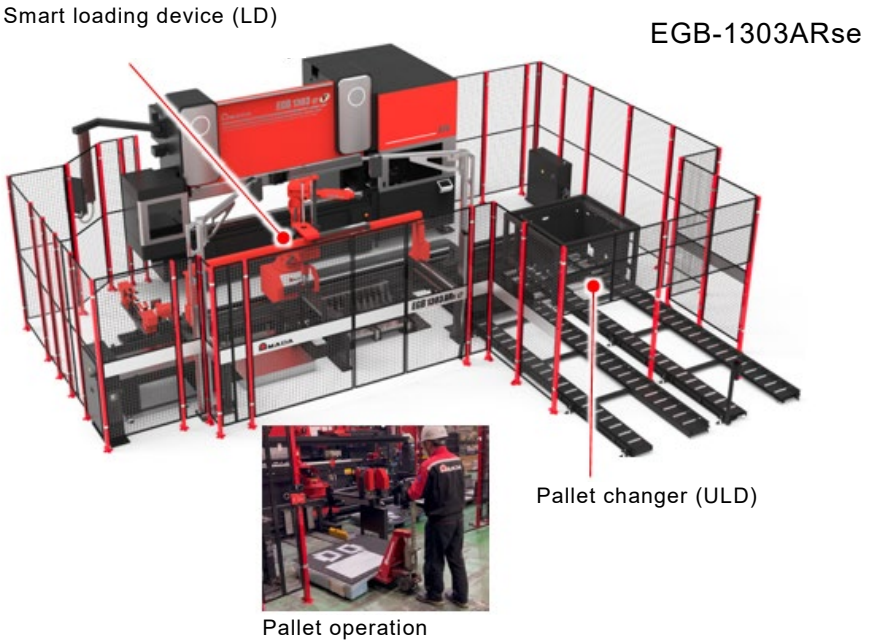
2. An original electric servo drive system offers both environmental burden reduction and high productivity

- Changing the drive from hydraulic to electric reduces CO_2 emissions by up to 20%.
- It is no longer necessary to perform the oil replacement and oil disposal that were essential on conventional hydraulic systems, so maintenance costs are greatly reduced. The oil usage is reduced by about 90%.
- When in standby, the servo power, monitor, LED, and other equipment are automatically turned off. This reduces the standby power consumption by approximately 50% or more.
- The table drive responsiveness and maximum speed are improved. The cycle takt for one shot is improved by up to 15%.
- The passing angle accuracy is improved, so it is possible for anyone to perform high-precision processing. The crowning axis built into the lower table has been advanced from the conventional left/right equivalent value control to the independent control of the two left/right axes. This makes it possible to maintain bending angle accuracy at any position on the table.

3. Advanced automation and semi-automation (ATC: Auto Tool Changer)

- In the use of a robot to automate the bending process, it was previously necessary to have specialist knowledge and intuition to correct the discrepancy between the programmed action and the actual robot action, and this work took time. With the EGB series, the correction process has been greatly automated by the reduction of the various correction amounts and the use of sensing technology. The machines are also equipped with a mechanism that automatically reflects the acquired correction amount in the motion of the robot, which has automated the position correction that previously relied on the judgment of veteran workers.
- Automating the bending process previously required work during the machine operation for the inputting of new materials and taking out of the finished products, so it was necessary to have frequent intervention of human workers. The EGB series has improved equipment for the material carry-in and carry-out. On the carry-in equipment, the combination of an image recognition camera and a robot dedicated to loading have eliminated the restrictions on the position and manner in which the materials can be loaded. This reduces the reloading work of heavy materials which previously carried out by workers while in a difficult, crouched position. For the carry-out equipment, in addition to the conventional belt conveyor specifications, these machines also make it possible to select pallet changer specifications, so it is possible to select the most appropriate carry-out method for the lots and operation methods of the user.
- The AMADA original ATC (Auto Tool Changer) has been improved to make it easier to use. The design saves space to increase the space for working, whilst also increasing the tool loading capacity by 30% compared to the conventional models. The machines are also equipped with completely automated ATC shutter

opening and closing and a catch prevention function, so they simultaneously achieve both worker safety and efficiency.



■ Specifications of machine

General-purpose machine		EGB-6020e	EGB-8025e	EGB-1303e
Pressurization	kN	600	800	1300
Table length	mm	2,150	2,600	3,110
Open height	mm	520 (620 for ATC model)		
Stroke length	mm	250		
Rapid closing	mm/s	250		
Maximum	mm/s	25		
Opening speed	mm/s	250		
ATC		**EGB-6020ATCe**	**-**	**EGB-1303ATCe**
Maximum loading	Punch	500 mm stockers x 15	-	800 mm stockers x 18
Maximum loading	Die	500 mm stockers x 18	-	800 mm stockers x 25

■ Specifications of machine (Automatic model)

		EGB-6013ARce	EGB-1303ARse
Pressurization	kN	600	1,300
Table length	mm	1,350	3,110
Open height	mm	585	620
Stroke length	mm	150	250
Rapid closing	mm/s	250	250
Maximum	mm/s	25	25
Opening speed	mm/s	250	250
Robot load	Kg	10 (including gripper)	20 (including gripper)

*The information in this release is subject to change without notice. We would appreciate your understanding in advance.